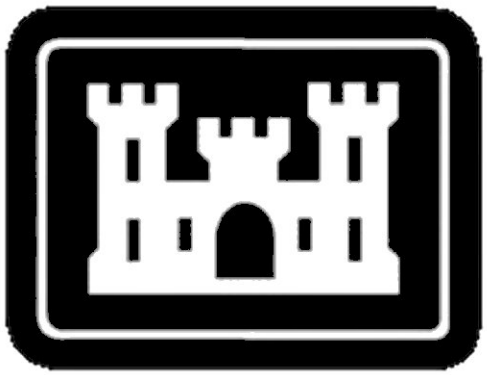
DRAFT ENVIRONMENTAL ASSESSMENT
MARMET LOCK REPLACEMENT PROJECT
VALUE ENGINEERING CHANGE PROPOSAL # 23
OFF-SITE DISPOSAL



U.S. ARMY CORPS OF ENGINEERS
HUNTINGTON DISTRICT
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1.0 Purpose and Need for Project

The Marmet Locks and Dam facility is located along the right descending bank of the Kanawha River at River Mile 67.7. The Marmet Lock Replacement Project (Project) was authorized as part of the Kanawha River Navigation Project by the River and Harbor Act of August 1935 in order to eliminate navigation traffic congestion. The project is designed to accommodate the use of modern jumbo barges, provide locking efficiency, facilitate safe movement of traffic, and replace existing aging locks at Marmet. The project was started in 2000, and is projected to be complete in February 2008.

In the summer of 2006, previously unidentified petroleum contamination was discovered during excavation of the upstream guidewall. This material required changes in the excavation and disposal from the original plan, which impacted the schedule of the entire project. The disposal of the remaining material to be excavated cannot be completed on schedule using the designated on-site disposal area due to technical and logistical issues. It is estimated that without a change to the planned disposal method, a four month delay in lock operations would result, which would incur an additional $7.9 million costs for construction.

This evaluation is in response to a submission by the project contractor of a Value Engineering Change Proposal (VECP). A VECP is "A specific cost reduction proposal, developed and submitted by a contractor under Value Engineering contract provisions, which requires a change to the contract specifications, purchase description, or statement of work."[1]. The contractor has proposed to dispose of approximately 136,000 cubic yards of excavated material off-site in order to meet the originally scheduled lock operation date. It was determined that the project completion date could be met and a cost savings realized provided the excavated material could be placed in a disposal area that did not have the weather and stability limitations of the designated on-site disposal area. The VECP identifies a potential off-site disposal area and anticipates a cost savings of approximately $1 million.

This document tiers from the Marmet Lock Replacement Final Environmental Impact Statement (FEIS). Consequently, the purpose and need for this action must also reflect the purpose of the overall project as defined in the FEIS. The major objective of the project is to eliminate navigation traffic congestion. The purpose of the action evaluated herein, the VECP, is to identify an alternative disposal location which would provide for meeting the originally scheduled lock operation date of February 2008 and thereby meeting the overall project objective of reducing navigation traffic congestion.

2.0 Alternatives

2.1 Initial Screening

The VECP proposed off-site disposal at Two Mile Farm, a property located on the right descending bank of the Kanawha River in Mason County, near Point Pleasant, WV. Upon request, the contractor identified several alternative sites that they considered feasible and

[1] AR 5-4, Department of the Army Productivity Improvement Program, as supplemented

cost effective. These included the O-Kan Harbor, Gallipolis, OH; a site at Plymouth, Putnam County, WV; a location at the former FMC industrial site in South Charleston, WV; and the Point Pleasant Marine facility in Point Pleasant, WV. The Corps also identified potential disposal locations on government property. These included locations at RC Byrd Lock and Dam (RC Byrd) and Winfield Lock and Dam. On the RC Byrd property, the potential disposal locations are the upstream and downstream decant structures, and an open field above the upstream decant structure. The Winfield project area has potential disposal areas in the decant structure, mitigation area and former Dry Branch stream area. An initial screening evaluated all of the proposed sites for potentially significant impacts to environmental resources and determined if they would meet the project objectives.

Two sites were eliminated during initial screening, the FMC site and the Point Pleasant Marine facility. The FMC site was eliminated due to potentially significant impacts resulting from transportation. The site is located in South Charleston, WV, and would require material to be offloaded from barges at a docking facility and then transported by truck across Route 60 to the disposal site. This would require a large number of trucks to cross a major roadway creating major traffic, safety and social impacts, as well as increased costs. The Point Pleasant Marine facility was eliminated because of issues associated with Hazardous, Toxic or Radioactive waste. The area is a former industrial facility, which has previously identified hazardous waste contamination. The current owners have conducted remediation and monitoring efforts; however, the scope of work that would be necessary under the Comprehensive Response Compensation and Liability Act guidance to insure that the Corps would not incur liability would be so extensive as to make disposal at the site for this action infeasible.

2.2 Intermediate Screening

A site visit was conducted for each of the remaining sites under consideration. The Two Mile Farm, O-Kan Harbor, Plymouth, RC Byrd decant structures and the Winfield Lock and Dam sites were removed from further consideration upon evaluation of the findings from the site evaluations, and the Upstream open field at RC Byrd and No Action alternatives were retained for a more detailed analysis.

Two-Mile Farm

The first proposed disposal site, the Two Mile Farm, was dismissed due to potential impacts to Prime Farmland. Located on the right descending bank of the Kanawha River at River Mile 2 in Point Pleasant, WV, the area is owned by Madison Coal and is maintained as a 150 acre farm producing corn and soybeans. The site is located adjacent to the river and is accessible by barge. The shoreline is used as a fleeting area for the Amherst Repair station and has existing mooring facilities. It is estimated that the proposed disposal of 136,000 cubic yards of material could be placed on 30 acres of the available farmland.

The soil at the proposed site is considered Prime or Unique by the USDA Natural Resource Conservation Service. A Land Evaluation and Site Assessment was conducted for the site in accordance with the Farmland Protection Policy Act. The site received a

Farmland Conversion Impact Rating of 168 out of possible 260. Guidance from the Farmland Protection Policy Act recommends consideration of protection of farmland scoring above a 160. No feasible alternative designs for disposal were identified that would reduce the impact to the desired level. Therefore, this alternative was dismissed from further consideration.

O-Kan Harbor

The O-Kan Harbor facility was also considered but eliminated due to concerns over potential impacts to wetlands. The site is located on the right descending bank of the Ohio River at River Mile 266 in Gallipolis, OH. The site is a portion of property for the O-Kan Marine repair station. The property is an industrial facility with a depression of approximately 10 acres that are available for disposal. The depression contains a drainage area and embayment. Further spoil placement area is available on approximately 5 acres of upland between the stream and the Ohio River. O-Kan currently has a barge offloading facility with river access; however, material would also need to be transported on the property by truck a short distance to the disposal area. The site could accommodate approximately 150,000 cubic yards of spoil material. The depression area that makes up the majority of the disposal site contains wetlands that would require mitigation in order to offset significant impacts; therefore, this alternative was dismissed from further consideration.

Plymouth

A small site at Plymouth, Putnam County, WV, was considered as a temporary storage area, but was eliminated from further consideration because it could only hold a small portion of the material to be disposed. The site is located on the right descending bank of the Kanawha River at River Mile 36 near Bancroft, WV. The site is owned by Amherst Industries and used for temporary storage and staging. The area is an open field located between the railroad and the Kanawha River, with river access from an existing dock. Since the site could only accommodate a portion of the disposal material, it was eliminated from further consideration.

RC Byrd Lock and Dam

The Robert C. Byrd Lock and Dam facility is located on the Ohio River at River Mile 279. Potential disposal locations on the property include the upstream decant structure, downstream decant structure, and an upstream open field.

a. **Upstream decant structure** – This site was eliminated from further consideration because the proposed project does not fall within the intended purpose of the decant structure. This area was constructed as a storage area for material from maintenance dredging. There was a significant public investment in construction of the decant structure. Disposal of the excavated material from Marmet would significantly shorten the useful life of this structure. The decant structure is a depression constructed by surrounding approximately 22 acres with a 20-foot tall berm. The area is maintained as primarily mowed grassland, and a portion of the area is used for staging and material storage. Disposal material would be transported to the site by barge and hauled a short

distance over the site by truck. The structure is estimated to have a capacity of 700,000 cubic yards designed for hydraulic dredge disposal.

b. **Downstream decant structure** – This site was eliminated from further consideration because the proposed project does not fall within the intended purpose of the decant structure. This site was also constructed as a dredge disposal area, but is not maintained and currently consists of a pond and wooded area. The structure is estimated to have a capacity of 2,000,000 cubic yards. Although the downstream decant structure has more capacity than the upstream, access to this location would require an additional lockage and further transport distance from the offloading location. Because of the costs associated with transportation and reducing useful lifetime of the decant structure, this alternative was also eliminated from further consideration.

c. **Upstream open field (Recommended Alternative)** – This alternative was retained for further consideration, and is the Recommended Alternative. The site was originally designated as part of the upstream decant structure in the plans for the R.C. Byrd Lock expansion project. A construction modification reduced the size of the structure's berm, leaving a portion of the area as a disturbed open field site. Disposal at this location could be off-loaded from a barge and placed directly on the bank. Trucks and bulldozers would then be used to place the material in an embankment against the upstream berm of the adjacent decant structure. The field could accommodate 150,000 to 350,000 cubic yards of material, depending on the design of the placement.

Figure 1 - R.C. Byrd Upstream open field

Winfield Lock and Dam

The Winfield Locks and Dam is located at River Mile 31.1 on the Kanawha River. Potential disposal areas include land surrounding the Army National Guard Armory, the fill embankment that is currently a mitigation area, and the dredge decant structure. Winfield's proximity to the Marmet project makes it an advantageous location for transportation of fill material by barge.

a. **Air National Guard Armory** – The site was not considered cost effective due to technical difficulty of on-site transport of material, and was eliminated from further consideration. The site is approximately 5 acres of barren fill placement adjacent to the armory at the Winfield facility. Although there is additional government-owned land surrounding the fill placement, this acreage is steeply contoured and contains high-quality habitat. This site could accommodate approximately 50,000 cubic yards of material, but could not accommodate all of the required excavation in consideration.

b. **Mitigation Area** – This area was also considered but dismissed because of the potential for significant impacts to terrestrial habitats. The site is composed of fill placement from the Winfield Lock and Dam Extension Project that contains wildlife habitat mitigation lands. The fill embankment has approximately 30 acres of flat surface on the top, some of which holds perched, emergent wetlands. Avoiding the perched wetlands, the fill area could accommodate over 350,000 cubic yards of additional fill. Although the habitat area that would be impacted is not in its climax succession state, impacts to the habitat would be significant and likely require mitigation.

c. **Decant Structure** – This site is located within the fill mound at Winfield Locks and Dam, covers approximately 5 acres, and has an estimated capacity of 400,000 cubic yards. This site was eliminated from further consideration because the proposed project does not fall within the intended purpose of the structure as a decant for hydraulic dredge disposal. The use of its capacity for the Marmet disposal would significantly shorten its useful lifetime.

No Action

For this alternative, the Corps would not accept the VECP as proposed and no off-site disposal would be taken. Disposal of excavated material would continue as originally planned on the Marmet site. The schedule for operation of the new lock would be extended to June 2008.

3.0 Environmental Resources and Impacts

The proposed project would be located on previously disturbed government property which was assessed as part of the dredge decant structure during the R.C. Byrd Lock and Dam expansion project. The No Action alternative would use the originally planned disposal location assessed for the Marmet Lock and Dam expansion project. After a review of this information and existing conditions, an initial screening of potential impacts determined that the following resources would not be impacted by the propsed project or No Action alternative, or impacts would be inconsequential:

- Noise
- Transportation
- Wild and Scenic Rivers
- Land Use
- Prime Farmland
- Fish and wildlife
- Air quality

- Aesthetics
- Human Health and Safety
- Environmental Justice
- Threatened and Endangered Species
- Hazardous, Toxic and Radioactive Waste

Water Quality

The proposed Upstream open field site is located adjacent to the Ohio River. Surface runoff from the site currently travels through a series of constructed ponds and into a drainage ditch that also captures water from an unnamed tributary and discharges into the Ohio River. In compliance with provisions in a land disturbance permit from the West Virginia Department of Environmental Protection, a sediment detention pond would be built to prevent excess sediments from discharging into the ponds and eventually the Ohio River. In addition to the detention pond, use of standard best management practices would result in no impact to water quality from the proposed action. There would also be no water quality effects for the No Action alternative, since these same mitigative measures would be utilized at the existing Marmet disposal.

Cultural and Historical Resources

The proposed action and No Action alternative would have no adverse effects on cultural or historical resources. An archaeological survey of the entire RC Byrd Lock and Dam project was conducted before the lock expansion was constructed. No archaeological sites were identified in the area proposed for placement of fill material. Additionally, the proposed action would not involve significant disturbance of the existing soil. Approximately 6-12 inches of the original 30 inches of topsoil remain on the field of the current site. Below the remaining topsoil, exploratory borings show deep Wisconsin and Illinoisan gravel deposits extending to bedrock. The proposed action is limited to shallow stripping of the remaining topsoil and surface disturbance due to placement of fill material. No impacts to archeological or cultural resources are anticipated due to the proposed fill. Since the No Action alternative would place disposal in the originally planned location on the Marmet site, there would also be no impacts to cultural or historical resources from this alternative.

Aquatic and Terrestrial Resources

There would be no significant impact to aquatic or terrestrial resources from the proposed action or No Action alternative. The proposed site is located upstream of the upper decant structure and consists of a 12-acre mowed open field. The mowed field is scattered with up to 3 acres of emerging wet meadow. The wet meadows do not contain hydric soils (and indicator of jurisdictional wetlands), but hydric characteristics would most likely develop over time, depending on hydrology. Aerial photos from previous construction show disturbance of the entire area, and recent soil samples indicate that much of the original topsoil had likely been stripped. Due to previous disturbance and periodic mowing, the field site remains partially disturbed.

The proposed fill area was designated for the disposal of dredge material during the lock expansion project. The site, along with the remaining area for the decant structure, was assessed for environmental impacts and mitigation was completed to offset impacts to habitat loss and temporal disturbance. In accordance with the original plan for the decant structure, all disturbed areas from the disposal would be covered with topsoil available on-site and seeded with a native seed mix, allowing development by natural succession. Therefore, existing conditions of the site and the nature of the action would be consistent within the original scope of considerations from the previous assessment, and can be considered to have no significant impacts to aquatic and terrestrial resources.

Additionally, the proposed action could impact a nearby mitigation area. The site is located adjacent to 14 acres of naturalized land designated as a mitigation area, which contains 7 acres of open-water ponds. The ponds were created to provide additional habitat during previous construction in cooperation with the West Virginia Department of Natural Resources. The surrounding fringe area sustains diverse populations of birds and mature vegetation.

In order to avoid impacts to habitat quality in the adjacent mitigation area during construction, ecological design would be incorporated into the final configuration of the fill placement. The final surface would be graded to a natural, uneven edge and not compacted. Clean soil and woody debris may be used to enhance the topography and habitat structure of the upstream ponds and fringe area. Through these measures, there would be no significant impacts to aquatic or terrestrial resources resulting from the project and habitat values would be expected to improve over the existing condition.

The No Action alternative would continue the planned placement of this material at the existing disposal site, which was assessed for environmental impacts during the Marmet Lock and Dam expansion planning process. No significant impacts to aquatic and terrestrial habitats would result under the No Action alternative.

Navigation

There would be no significant negative impacts to navigation from the proposed project; however, there would be substantial beneficial effects. Completing the Marmet additional lock chamber construction on time would result in a significant improvement to the Kanawha River navigation system beginning in February 2008. In 2001, more than 16.4 million tons of commerce locked through Marmet. The new lock chamber at Marmet would reduce the average transit time of 4.7 hours to 0.8 hours per barge tow. At current traffic levels, the additional lock chamber would yield over 16,400 hours of trip time savings per year for the 4,000 tows that would use the project. The off-site disposal alternative would reach this savings in transit time 4 months sooner than under the No Action alternative. This translates to a savings of approximately 5500 hours of trip time savings for the off-site disposal alternative. The would be no negative direct impacts to navigation under the No Action alternative, but the beneficial effect of reduced time for locking at the Marmet project would not be realized until June 2008.

Cost

Discovery of contaminated soils during excavation of the upstream guidewall caused a delay in the construction schedule. Currently, the remaining excavation can not be disposed of on-site in the originally scheduled timeframe due to technical limitations. This will extend the construction period four months which will delay lock operation as well as incur an additional $7.8 million. In the VECP, the contractor identified a cost savings to the government of approximately $1 million by utilizing off-site disposal. This cost savings would not be realized by the No Action alternative, which would continue on-site disposal and incur the additional cost from the approximate 4-month extended construction period.

4.0 Conclusion

There would be no significant negative impacts from the proposed action of off-site disposal at the R.C. Byrd Lock and Dam upstream open field site. There would be a beneficial effect for navigation on the Ohio River resulting from an earlier lock operation date and a significant cost savings to the government. There would also be no significant effects of the No Action alternative to continue on-site disposal, however the benefits to navigation and government cost savings would not be realized. Therefore, disposal of 136,000 cubic yards of excavated material from Marmet at the R.C. Byrd upstream open field is recommended.

Appendix A

Draft Finding of No Significant Impact

-DRAFT-

FINDING OF NO SIGNIFICANT IMPACT
MARMET LOCK REPLACEMENT PROJECT
VALUE ENGINEERING CHANGE PROPOSAL # 23
OFF-SITE DISPOSAL

1. I have conducted an environmental assessment in the overall public interest concerning implementation of the Marmet Lock Replacement Project, Value Engineering Cost Proposal #23, Off-site Disposal Project. The purpose of this project is to identify an alternative disposal location which would provide for meeting the originally scheduled lock operation date of February 2008 and thereby meeting the overall project objective of reducing navigation traffic congestion. A cost savings of approximately $1 million is anticipated.

2. The possible consequences of the project have been studied for biological, cultural and social effects. Another factor bearing on my assessment was the capability of the project to meet the public needs for which it was proposed. The following references that assessment:

a. Biological Considerations. The Huntington District has taken reasonable measures to assemble and present the known or foreseeable environmental impacts of the project in the environmental assessment. These impacts involve biological and human resources. Impacts to biological resources would be minor as a result of the proposed action. All adverse effects of project implementation are insignificant or may be avoided through management techniques.

b. Social Well-Being Considerations. No significant economic or social well-being impacts are foreseen as a result of the proposed action. No archeological resources are recorded in the project area and the selected project alternative would not impact significant unrecorded archeological sites because it involves use of an area previously assessed and mitigated for by the Robert C. Byrd Lock and Dam expansion project.

c. Coordination with Resources Agencies. Pursuant to the Fish and Wildlife Coordination Act (FWCA) of 1958, coordination with the U.S. Fish and Wildlife Service has been maintained throughout the study. No effects on fish and wildlife would occur as a result of the proposed action. Also, in accordance with the Endangered Species Act, as amended, the recommended plan would not impact listed species.

d. Other Pertinent Compliance. No prime or unique farmland under the Farmland Protection Policy Act will be involved. The proposed action is also in compliance with the National Historic Preservation Act, (Section 10632 CFR 300), Executive Order (EO) 11988 (Floodplain Management) and EO 11990 (Protection of Wetlands).

e. Other Public Interest Considerations. There has been no significant opposition to the proposed action by State or local Governments, or organized environmental

groups. Comments received during the public review period have been included in the Final Environmental Assessment. There are no unresolved issues regarding the implementation of the project.

f. Section 176(c) Clean Air Act. The proposed action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the proposed action will not exceed *de minimis* levels or direct emissions of a criteria pollutant or its precursors and is exempted by 40 CFR Part 93.153.

5. I find the Marmet Lock Replacement Project, Value Engineering Cost Proposal #23, Off-site Disposal Project has been planned in accordance with current authorization as described in the Environmental Assessment. The project is consistent with National policy, statutes, and administrative directives. This determination is based on thorough analysis and evaluation of the project and alternative courses of action. In conclusion, I find the proposed action will have no significant adverse effect on the quality of the human and/or natural environment.

_____ _____

DATE

DANA R. HURST
Colonel, Corps of Engineers
Commanding